

## **6.0 ALTERNATIVES ANALYSIS**

In accordance with section 15126.6 of the State CEQA Guidelines (California Governor's Office of Planning and Research 2001), an EIR must "describe a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most the basic objectives of the Project, but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives." The State CEQA Guidelines also require that a No Project Alternative be evaluated and that under specific circumstances, an environmentally superior alternative be designated from among the remaining alternatives.

### **6.1 ALTERNATIVE CONSIDERED BUT REJECTED - MECHANICAL CUTTING OF CAISSONS**

This alternative methodology would eliminate the use of explosive charges to topple the caissons and would instead use mechanical cutting techniques. This would involve the use of diamond wire cutting methodology that would be deployed by divers and remotely operated from surface vessels. Initial preparation of the caissons would be similar to the Proposed Project. The base of the caissons would be exposed by divers. Divers would then deploy the diamond cutting tool and return to the support vessel. Cutting would be completed by remotely controlled equipment and the caissons recovered by the derrick barge. Inshore pilings would be removed. The applicant evaluated this alternative, but rejected it due to questions regarding its feasibility. Application of this method is considered infeasible due to the extreme amount of weight of each caisson. This method cannot be utilized on heavy structures from a remote location. The barge from which the diamond wire cutting mechanism would be operated cannot sustain the weight of an entire caisson toppling to the sea floor. The caissons must be allowed to free-fall because any connection between the falling caisson and the barge would endanger all people and equipment involved and would not likely be completed successfully.

### **6.2 ALTERNATIVES PROPOSED FOR CONSIDERATION**

This section includes a description of alternatives and provides a comparative analysis of the potential impacts from the alternatives to those identified for the Proposed Project.

#### **6.2.1 Original Project (Removal of Caissons - No Roosting/Nesting Platforms)**

Under the original project, the concrete pier structure, including caissons, would be removed entirely utilizing typical offshore methodology and equipment, and recovered from the site. Removal of the topside decking would be conducted within the use of a 25-ton conventional barge-based crane. Removal of the caissons would be accomplished through the use of explosives to initially topple them, and then recovered from the sea floor with the use of a 350-ton capacity crane. Once recovered, the columns would be transported aboard the barge for recycling. This project alternative would meet the objective of removing the hazardous structure from the site.

### **6.2.3 No Project Alternative**

Under the No Project Alternative, the existing facilities would be allowed to continue to exist in their current state. It is anticipated that natural conditions, i.e., corrosion, storm waves, will result in the eventual toppling of the concrete caissons. These caissons would remain on the seafloor and serve as additional hardbottom substrate. Pilings extending inshore would continue to exist in the area.

## **6.3 IMPACTS ASSESSMENT**

### **6.3.1 Original Project (Removal of Caissons – No Roosting/Nesting Platforms)**

#### **6.3.1.1 Geology and Coastal Processes**

This alternative would result in impacts associated with disturbance of sediments during caisson removal; however, it would be less than that associated with normal seasonal displacement during winter storms and would not be significant as is the case with the Proposed Project.

Anchor and chain abrasion of hard bottom would occur; however, due to the protective measures incorporated in the Original Project, like the Proposed Project, no significant impact would result.

Removal of the pier remnant would have an effect on coastal currents, but due to the limited nature of the project, this effect is not considered significant. Similarly, the Proposed Project would not result in a significant impact on coastal currents.

The Original Project would eliminate the pier remnants and thus a diffuse obstacle to waves. This impact is considered not to be significant. The Proposed Project would introduce hard bottom substrate to the project area, and would thus have a more substantial alteration of wave energy. However all of this impact would be limited in nature and would not be considered significant.

The pier remnants do not create a substantial impediment to the movement of nearshore sediment drift. Therefore, the removal of the pier as proposed under the Original Project would not have a significant impact on nearshore sediment drift and beaches. Similarly, the Proposed Projects effect on nearshore sediment drift and beaches is not significant, but would be greater in magnitude than for the Original Project due to the installation of hardbottom substrate.

Because this alternative would not include construction of new structures, the insignificant seismic impact on new structures would be avoided.

#### **6.3.1.2 Air Quality**

This alternative would require the support of additional marine vessels over the currently Proposed Project. Due to the short-term nature of the Original Project and Proposed Project and controls built into the equipment to be used, air quality impacts under this alternative would

be less than significant as with the currently Proposed Project. This alternative would avoid the insignificant air quality impact associated with occasional trips to the roosting/nesting platforms associated with the Proposed Project.

#### **6.3.1.3 Transportation**

Short-term, less than significant transportation impacts on local and regional roads and truck traffic hazards would be of slightly greater magnitude under this alternative since the caissons would be removed from the site and would require transport to their ultimate destination. None-the-less, this impact would not be significant for either this alternative or the Proposed Project due to the short-term nature of the impact and favorable operating conditions of roads that would be affected.

Both the Original and Proposed Projects would temporarily increase vessel traffic. This impact would not be significant for either project because work vessels would travel established vessel corridors.

The Original Project avoids the significant, but mitigable impact associated with the hazard to navigation that is associated with the Proposed Project which would replace the existing hazard posed by the pier remnants with bird roosting/nesting platforms on four piles.

#### **6.3.1.4 Biological Resources**

This alternative would cause an unavoidable biological resources impact due to the loss of valuable offshore roosting/nesting areas, as defined by the CDFG for California brown pelican and Brandt's cormorants.

Significant, but mitigable biological impacts associated with the use of explosives would be slightly worst with this alternative because the detonations were not proposed to occur in rapid succession.

Impacts to marine mammals from vessel traffic would not be significant for the Original or Proposed Project due to safeguards incorporated into both projects.

This alternative, like the Proposed Project, would disturb sediments. This impact would not be considered significant relative to existing conditions and with the implementation of proposed protection measures for either project. However, the Proposed Project's effect would be greater due to the installation of quarry rock as hard bottom substrate.

Potential impacts to marine life from hydrocarbon spills would occur under this alternative as well as the Proposed Project. Due to the measures that would prevent or minimize spills that are incorporated into both projects, such impacts would not be significant.

The Original Project would result in temporary impacts to commercial and recreational fishing due to preclusion of the area involved in project implementation. This impact is not significant for either project because of the limited area affected and short-term nature of the

impact. However, this alternative would preclude use of the toppled caissons for hard-bottom substrate and introduction of quarry rock which can serve as habitat for a variety of marine life.

The Original Project and Proposed Project would impact kelp from anchoring and removal of the pier remnant. This impact would be significant, but mitigable. Under the Proposed Project, a net benefit to kelp would occur due to the introduction of additional substrate that can serve as anchoring locations for kelp.

This alternative would not provide the minor benefit of improved commercial and recreational fishing provided by the improved habitat associated with the Proposed Project's hard bottom substrate component.

#### **6.3.1.5 Hazards**

This alternative, like the Proposed Project, would result in hazards associated with the transportation and use of explosives. This impact would not be significant for either project due to the safeguards incorporated into the projects.

This alternative, like the Proposed Project, has the potential to result in the release of hydrocarbons from operation of vessels and equipment as well as existing onsite wells. However, since the wells have been properly abandoned and an Oil Spill Contingency Plan is incorporated in both projects, impacts are not considered significant.

Personnel safety during diving is a concern for both the Original and Proposed Project. However, the use of commercial divers that work in a highly regulated industry would ensure that this impact is less than significant for either alternative project.

#### **6.3.1.6 Noise**

Noise associated with derrick activities and the use of explosives would be similar to those of the Proposed Project. These impacts would not be significant due to the distance from the noise generating activities to sensitive receptors. However, short-term significant, but mitigable noise impacts from construction would be avoided under this alternative because pile driving activity and the associated noise would not occur.

#### **6.3.1.7 Aesthetics**

Short-term aesthetic impacts associated with this alternative would be similar to those associated with the Proposed Project. This alternative would have a beneficial long-term aesthetic impact due to the removal of the pier remnants, and the less than significant long-term aesthetic impacts associated with the installation of the roosting/nesting platforms would be avoided under this alternative.

#### **6.3.1.8 Cultural Resources**

Less than significant potential impacts to unknown cultural and paleontological resources would result for this alternative as well as the Proposed Project. However, since pile

installation would be avoided under this alternative, the magnitude of the effect would be less than for the Proposed Project.

#### **6.3.1.9 Recreation**

Temporary recreation impacts of the Original Project Alternative would be similar to the Proposed Project since vessel anchoring and the need to preclude recreational activities in the work area will continue. These impacts are not considered significant due to the short-term nature and limited nature of the construction activities. Less than significant recreational impacts to onshore activities, boating and surfing associated with the installation of the bird roosts and hardbottom substrate would be avoided under this alternative. However, the beneficial effect to fishing and diving would not be provided by the Original Project.

#### **6.3.1.10 Water Quality**

Short-term water quality impacts would be slightly less for this alternative than the Proposed Project since quarry rock would not be deposited on the site. However, such impacts are not considered significant for either project relative to turbidity associated with existing seasonal storm conditions and considering the limited and short-term nature of the impact.

#### **6.3.1.11 Environmental Justice**

Similar to the Proposed Project, the Original Project would not impact minority or low income populations or affordable housing as both projects would involve similar activities in the same area.

### **6.3.2 No Project Alternative**

All of the Proposed Project-related impacts would be avoided under this alternative; however, the hazards associated with the decaying caisson structure would remain until these structures are toppled by natural processes. Public safety hazards would continue until such time that the caissons and deck are toppled by natural processes. The structure would no longer be available for the California brown pelican and Brandt's cormorants to roost or nest and the resulting debris from the caissons may also result in a navigational hazard.

## **6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

The State CEQA Guidelines [section 15126.6 (d)] require that an EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project. The Guidelines [section 15126.6 (e)(2)] further state, in part, that **"If the environmentally superior alternative is the "No Project" alternative**, the EIR shall also identify an environmentally superior alternative from among the other alternatives." (Emphasis added)

Based upon the document's analyses of the Project alternatives presented above, it has been determined that the "No Project" Alternative, would, in itself, result in both near and long term hazards to the public's health and safety. It is, consequently, not considered to be the environmentally superior alternative.

When the "No Project" Alternative is not the environmentally superior alternative, the State CEQA Guidelines do not require identification of an environmentally superior alternative from the remaining alternatives.